GLOBWAVE: A new generation of ocean wave products

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Introduction to the project

The ESA Globwave project is a three year initiative funded by the European Space Agency (and subsidised by the French Space Agency CNES) to service the needs of satellite wave product users across the globe.

Led by Logica UK, with support from CLS, IFREMER, SatOC and NOCS, the project will provide free access to satellite wave data and products in a common format, both historical and in near real time from various European and American satellites. Building on the successes of similar projects for SST or ocean colour, the project aims to stimulate increased use and analysis of satellite wave products.

In addition to common format satellite data we shall provide comparisons with in situ measurements, interactive data analysis tools and a pilot spatial wave forecast verification scheme for operational forecast production centres. The project will begin operations in early 2010, being directed by regular structured user consultation.

Project outputs

The main outputs form the GlobWave project will be:

- A portal (http://www.globwave.info) as the single point of contact for satellite wave data, cal/val information and integrated online diagnostic tools.
- Handbook for new users providing information on the various types of satellite wave data and how to access and utilise them.
- Inter-comparison of different satellite wave data sources.
- Cross characterisation of different SAR and altimeter wave data with collocated in-situ measurements.
- A uniform, harmonised, quality controlled, multi-sensor set of satellite wave data and ancillary information in a common format, with a consistent characterisation of errors and biases.
- The demonstration of new types of satellite wave data products, such those based on new retrieval techniques, new types of satellite data, merged data from different sensors, or combinations of model and satellite data.
- Develop and trial a pilot facility, following JCOMM recommendations, to permit operational agencies to routinely spatially inter-compare their wave models with each other, and with satellite wave data.

GlobWave and user consultation

User consultation will be at the heart of the GlobWave project. The project is guided by a dedicated Steering Team, and driven by the needs of the User Group (35 institutions committed to providing feedback and user requirements). However, we are very keen to represent the entire satellite wave community, and cordially invite you to register your details with us at http://www.globwave.info.

Registered users are invited to attend the annual user consultation meetings (January 2010, 2011 and 2012), to be held at user premises, and receive a biannual GlobWave Newsletter.

Contact us!

Please contact the Globwave project manager:
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The project team

The GlobWave Technical Officer at ESRIN is Dr. Simon Pinnock (simon.pinnock@esa.int).
GlobWave is a Date User Element (DUE) project under contract number 21891/08/I-EC.

Demonstration products

The GlobWave project will also host a number of demonstration products, based wholly or partly on satellite derived wave measurements. The following are examples of such demonstration products.

Pilot extension to the JCOMM WFVS

As required by the JCOMM Expert Team on Wind Waves and Storm Surges (ETWS), Globwave will construct an extension of the JCOMM Wave Forecast Verification Scheme (WFVS) currently operating at the European Centre for Medium-Range Weather Forecasting (ECMWF).

This pilot extension will for the first time provide systematic spatial inter-comparison of forecast wave data products against each other and against GlobWave satellite derived products.

Designed form the onset to be highly configurable and flexible, participants will be able to interactively configure their reports to suit their own needs.